AMENDMENTS TO THE CLAIMS

1. (currently amended) A process for preparing a broad molecular weight polyethylene by polymerizing ethylene in the presence of a polymerization catalyst, the process comprising the following steps, in any mutual order:

   a) polymerizing ethylene monomer, optionally together with at least one first α-olefinic comonomer having from 3 to 12 carbon atoms, in a first gas-phase reactor in the presence of a first amount of hydrogen, thereby forming an ethylene polymer;

   b) copolymerizing ethylene with at least one second α-olefinic comonomer having from 3 to 12 carbon atoms in a second gas-phase reactor in the presence of a second amount of hydrogen, wherein the second amount of hydrogen is less than the first amount of hydrogen;

   where in at least one of said gas-phase reactors growing polymer particles flow upward through a first polymerization zone (riser) under fast fluidization or transport conditions, leave said riser and enter a second polymerization zone (downcomer) through which they flow downward under the action of gravity, leave said downcomer and are reintroduced into the riser, thus establishing a circulation of polymer between said two polymerization zones,

   wherein the ethylene polymer obtained from step a) represents from 40 to 65% by weight of a total ethylene polymer produced in the overall process.

2. (original) The process according to claim 1, wherein step a) is performed upstream step b).
3. (previously presented) The process according to claim 1, wherein the ethylene polymer obtained from step a) has a density higher than 0.955 kg/dm^3.
4. (previously presented) The process according to claim 1, wherein the ethylene polymer obtained from step a) has a melt flow rate MIE in the range of 10 to 400 g/10 min.
5. (original) The process according to claim 4, wherein the MIE is from 100 to 200 g/10 min.
6. (currently amended) The process according to claim 1, ~~wherein~~further comprising in step a) a hydrogen/ethylene molar ratio ~~is comprised~~between 0.5 and 5.0, and wherein the ethylene monomer ~~being comprised between 5 and~~is present in an amount from 5 to 50 % by volume.
7. (previously presented) The process according to claim 1, wherein an operating temperature in step a) is selected between 50 and 120°C.

8. (previously presented) The process according to claim 1, wherein an operating pressure in step a) is between 0.5 and 10 MPa.
9. (original) The process according to claim 1, wherein step a) is performed in a fluidized bed reactor.
10. (previously presented) The process according to claim 1, where step a) and b) are carried out in a sequence of two gas-phase reactors in which growing polymer particles flow upward through a riser under fast fluidization conditions, leave said riser and enter a downcomer through which they flow downward under the action of gravity, leave said downcomer and are reintroduced into the riser.
11. (canceled)
12. (previously presented) The process according to claim 1, wherein the ethylene polymer and entrained gas coming from step a) are passed through a solid/gas separator, thereby forming a separated polymer, and the separated polymer is fed to the reactor of step b).
13. (previously presented) The process according to claim 1, wherein an operating temperature in step b) is in the range from 65 to 95°C.
14. (previously presented) The process according to claim 1, wherein an operating pressure in step b) is in the range from 1.5 to 4.0 MPa.
15. (previously presented) The process according to claim 1, wherein the α-olefinic comonomer of step b) is selected from 1-butene, 1-pentene, 1-hexene, 4-methyl-1-pentene, 1-heptene and 1-octene.
16. (previously presented) The process according to claim 1, wherein the second reactor of step b) is operated by establishing different conditions of monomers and H_2 concentration within said riser and said downcomer.
17. (previously presented) The process according to claim 16, wherein said different conditions are achieved by feeding at least one of a gas and a liquid mixture into said downcomer, said at least one of a gas and liquid mixture having a composition different from that of a gas mixture present in said riser.
18. (currently amended) The process according to claim 16, ~~wherein~~further comprising a hydrogen/ethylene molar ratio in said downcomer of step b) ~~is comprised~~of between 0.005 and 0.2, and an ethylene concentration is ~~comprised~~ from 1 to 20 % by volume.

19. (previously presented) The process according to claim 16, wherein a comonomer concentration in said downcomer of step b) is from 0.3 to 5 % by volume based on a total volume of gas present in said downcomer.

20. (currently amended) The process according to claim 16, ~~wherein~~further comprising a hydrogen/ethylene molar ratio in said riser of step b) ~~is comprised~~of between 0.05 and 0.3, and an ethylene concentration ~~being comprised~~ from 5 to 15 % by volume

21. (previously presented) The process according to claim 16, wherein a comonomer concentration in said riser of step b) is from 0.1 to 3.0% by volume based on a total volume of gas present in said riser.

Claims 22-25 (canceled)